

From wang!elf.wang.com!ucsd.edu!info-hams-relay Sat Apr 13 16:50:23 1991 remote  
from tosspot  
Received: by tosspot (1.64/waf)  
via UUCP; Sun, 14 Apr 91 19:13:37 EST  
for lee  
Received: from somewhere by elf.wang.com  
id aa12441; Sat, 13 Apr 91 16:50:22 GMT  
Received: from ucsd.edu by relay1.UU.NET with SMTP  
(5.61/UUNET-shadow-mx) id AA04559; Sat, 13 Apr 91 12:12:25 -0400  
Received: by ucsd.edu; id AA24406  
sendmail 5.64/UCSD-2.1-sun  
Sat, 13 Apr 91 07:08:36 -0700 for nixbur!schroeder.pad  
Received: by ucsd.edu; id AA24389  
sendmail 5.64/UCSD-2.1-sun  
Sat, 13 Apr 91 07:08:28 -0700 for /usr/lib/sendmail -oc -odb -oQ/var/spool/  
lqueue -oi -finfo-hams-relay info-hams-list  
Message-Id: <9104131408.AA24389@ucsd.edu>  
Date: Sat, 13 Apr 91 07:08:26 PDT  
From: Info-Hams Mailing List and Newsgroup <info-hams-relay@ucsd.edu>  
Reply-To: Info-Hams@ucsd.edu  
Subject: Info-Hams Digest V91 #294  
To: Info-Hams@ucsd.edu

Info-Hams Digest                      Sat, 13 Apr 91                      Volume 91 : Issue 294

Today's Topics:

"Stray Voltage" on 60 Minutes  
10m Glass Mount Antenna  
2m Antenna  
2m thru-glass ant question  
50 to 75 ohm transformer?  
ARRL BULLETIN 18 ARLB018  
Can you really learn Code from tapes?  
DX BULLETIN 18 ARLD018  
FCC & Scanners, the REAL story  
HamStacks - Monthly Announcement  
HF rig names? (2 msgs)  
Icom charge currents?  
Info-Hams Digest V91 #267  
Large 110->220 Transformers.  
mods for IC-740  
Most Offensive Scanner (2 msgs)  
SATELLITE BULLETIN 94  
SPECIAL BULLETIN 9 ARLX009

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>  
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>

Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

-----  
Date: 12 Apr 91 23:40:11 GMT  
From: ucselx!usc!zaphod.mps.ohio-state.edu!pacific.mps.ohio-state.edu!linac!  
unixhub!stanford.edu!paulf%shasta.Stanford.EDU@ucsd.edu  
Subject: "Stray Voltage" on 60 Minutes  
To: info-hams@ucsd.edu

In article <39910016@hpfcdc.HP.COM> perry@hpfcdc.HP.COM (Perry Scott) writes:  
>And all this time, I've been laying radials when I should have been  
>buying cows. Wonder what the neighbors will think.  
>Perry / KFOCA

Why, Perry, I can't believe you don't know about:

```

'o"o`  ----
MOO!   - 0 -/   \           GROUND BEEF!
      \--WW/\
       /\ /\ \
        \
        -----
        -----
        ---
        -

```

--Paul Flaherty, N9FZX | "Think of it as evolution in action."  
->paulf@shasta.Stanford.EDU | -- Larry Niven and Jerry Pournelle

-----  
Date: 13 Apr 91 04:03:25 GMT  
From: netnews.upenn.edu!eniac.seas.upenn.edu!depolo@RUTGERS.EDU  
Subject: 10m Glass Mount Antenna  
To: info-hams@ucsd.edu

In article <1991Apr11.125433.11348@vaxa.strath.ac.uk> cadp06@vaxa.strath.ac.uk  
writes:

>I am no expert on the subject, so I may appear somewhat ignorant here (excuse  
>me!), but I'm intrigued by a glass-mounted antenna I've seen on sale here

>in the UK - an antenna which claims to be the only one of its kind in the  
>world - designed to operate on 11m (CB) and, it is claimed, 10m (hence the  
>posting here).

Well, it's not the only one in the world. Here in the states, Antenna  
Specialists makes the same thing. It's a center loaded whip,  
approximately 5 feet long (from visual approximation). They make  
different version in the 10 and 11 meter areas.

As far as performance goes, I have no personal experience.

--- Jeff

--

-----  
Jeff DePollo N3HBZ/AE Twisted Pair: (215) 386-7199  
depolo@eniac.seas.upenn.edu RF: 146.685- 442.70+ 144.455s (Philadelphia)  
University of Pennsylvania Carrier Pigeon: 420 S. 42nd St. Phila PA 19104  
-----

Date: 12 Apr 91 18:11:33 GMT  
From: casbah.acns.nwu.edu!zaphod.mps.ohio-state.edu!swrinde!cs.utexas.edu!convex!  
texsun!letni!rwsys!kf5iw!k5qwb!lrk@ucsd.edu  
Subject: 2m Antenna  
To: info-hams@ucsd.edu

bh@eng.auburn.edu (Brian Hartsfield) writes:

>  
> I recnetly bought an HT and a 2m/440 dual band magnetic mount anteanna for my  
> can. My question is - if I use the HT inside can I hook the magnet mount  
> anteanna to it and use it? If not, what kind of 2m antanna would I have to  
> have to use indoors. Thanks in advance.  
>  
> Brian Hartsfield

This should work about as good as when on your car assuming you  
remember that the ground plane is part of the 'antenna system'.  
Put the antenna on top of a steel file cabinet or something similar  
and keep it away from other metal objects by two feet ( this only  
means above the level of the ground plane ). My two meter packet  
ran this way from my apartment for several years.

-----

73,  
Lyn Kennedy

lrk@k5qwb.lonestar.org                      lrk@k5qwb.UUCP  
utacfd.utar1.edu!letni!rwsys!kf5iw!k5qwb!lrk  
K5QWB @ N5LDD.#NTX.TX.US.NA  
P.O. Box 5133, Ovilla, TX, USA 75154

----- "We have met the enemy and they are us." Pogo -----

-----  
Date: 12 Apr 91 16:46:50 GMT  
From: ucselx!usc!zaphod.mps.ohio-state.edu!mips!cs.uoregon.edu!milton!sumax!amc-  
gw!pilchuck!ssc!tad@ucsd.edu  
Subject: 2m thru-glass ant question  
To: info-hams@ucsd.edu

In article <14570038@hpnmdla.hp.com>, alanb@hpnmdla.hp.com (Alan Bloom) writes:

> In rec.radio.amateur.misc, jmccombi@bbn.com (John McCombie) writes:

>

> >A while back I posted an article about thru-the-glass 2m antennas for  
> >one's car.

(stuff deleted)

>

> I think the answer is that a bent coathanger will work as an antenna too.  
> If the repeater is good and strong at your location, it may appear to work  
> fine. The only way to tell is to do a side-by-side comparison with an  
> antenna of known gain.

>

> With no ground, the coax shield is acting as your "ground plane."  
> I expect there is considerable radiation from the shield inside the car.  
> You will probably get a more consistent omni-directional pattern with  
> the shield grounded to the car body right at the window.

But the one I have used (Larsen) is a 1/2 wave antenna...and supposedly  
does not need a ground plane. AEA uses the same design idea for the  
AEA Hotrod HT antenna. Now if it were a 1/4 wave or 5/8 wave  
design, then the ground requirement would still hold. But end  
fed 1/2 wave antennas are supposed to be more ground independent.

Tad Cook  
Seattle, WA  
Packet: KT7H @ N7ENT.#WWA.WA.USA.NA  
Phone: 206/527-4089  
MCI Mail: 3288544  
Telex: 6503288544 MCI UW  
USENET:...uw-beaver!sumax!amc-gw!ssc!tad

or, tad@ssc.UUCP

-----  
Date: 12 Apr 91 16:14:28 GMT  
From: hpl-opus!hpnmdla!glenne@hplabs.hpl.hp.com  
Subject: 50 to 75 ohm transformer?  
To: info-hams@ucsd.edu

In rec.radio.amateur.misc, MROWEN%STLAWU.BITNET@cornellc.cit.cornell.edu (Michael Owen) writes:

In a recent posting, Joe Skoler asked about 50-75 ohm transformes so he could use CATV line. Here's an answer:

You don't need them, even at UHF. All you need to do

The basic principle is that the impedance of the load end of any feedline is repeated at 1/2 wavelength intervals along the feedline no matter what impedance the feedline is. So you just trim the feedline until its input end falls at a 1/2 wave multiple and it will look exactly like the antenna's impedance. In addition, at UHF, the feedline's loss will further improve the picture.

It may improve the load that the transmitter sees but it will also increase the amount of energy lost in the transmission line. If transmission line were lossless the only issue would be matching the TX to a load which is not longer that of the antenna. However, running a lossy transmission line with high SWR (50/75 ohm mismatch is not terribly high swr) results in higher peak voltages and currents on the line and results in more dissipative loss... the bottom line is less power gets radiated by the antenna in such a scenario.

In my opinion, this procedure is far less lossy, and certainly simpler, than installing 50-75 ohm 1/4wave transformers at each end of the hardline. I have done it and it works.

I don't agree that it is far less lossy but it certainly *is* simpler and for many situations may be just fine. If your antenna tuner/tx can match what it sees you may be able to get by just fine with out doing *anything*\*. That was what my previous reference to HF operation of such lines/antennas was about.

Glenn Elmore -N6GN-

N6GN @ K3MC

glenn@n6gn.ampr.org  
glenne@hpnmd.hp.com

-----  
Date: 13 Apr 91 09:30:22 GMT  
From: tut.cis.ohio-state.edu!n8emr!@ucbvax.berkeley.edu  
Subject: ARRL BULLETIN 18 ARLB018  
To: info-hams@ucsd.edu

=====  
| Automatic relayed from packet radio via |  
| N8EMR's Ham BBS, 614-895-2553 |  
=====

ZCZC AG83  
QST DE W1AW  
ARRL BULLETIN 18 ARLB018  
FROM ARRL HEADQUARTERS NEWINGTON CT  
APRIL 13, 1991  
RELAYED BY KB8NW/OBS & BARF-80 BBS  
TO ALL RADIO AMATEURS

There seems to be some misinformation concerning a recent FCC action which shifted the 80 meter Novice subband down 25 KHz to 3.675 through 3.725 MHz. This change was effective March 16, 1991. All amateur stations are limited to 200 watts in this subband. Amateurs may use CW, RTTY and data between 3.725 and 3.750 MHz. Phone is prohibited in this segment.

-----  
Date: 8 Apr 91 08:48:03 GMT  
From: hpda!hpcuhb!hpsqf!hpgmola!hpgmolb!dstock@hplabs.hpl.hp.com  
Subject: Can you really learn Code from tapes?  
To: info-hams@ucsd.edu

It may go better than you expect, Tim. Over here, we've had no-morse VHF licences for many years. Up to about 5 years ago they were banned from using CW. This has since been rescinded, and they may use CW, but must identify in speech (anomalously, their packet machine id in CW seems to be accepted)

For the past few years, we have had morse-learning nets and 1:1 sessions on the air. The opportunity for talk-back and conversation seem to have made all the difference to people who had difficulties with the impersonal methods like tapes and 1-way slow morse transmissions. The fact that they now have a licence, albeit restricted to >30MHz seems to reduce anxiety and help greatly.

One of our locals, after quite a long time has just passed his morse test. First time. He had much difficulty using the old methods and has benefited from knowing that a lot of people were rooting for him.

Being involved with others helps you to keep to a regular practice schedule.

If you had difficulty, maybe you were trying too hard ?

May I suggest that you practice reading morse regularly. that you don't keep tabs on your speed. that you don't worry about how long it will take. just have a set number of sessions per week.

set the speed down nice and low, where you can comfortably copy, and stay at this speed until you find it boring waiting for the next symbol, then speed up a little. stay at this speed until you find yourself once more waiting for the next symbol..... and so on.... don't try to measure your speed, just let it sneak up on you.

This is not, for many people, the fastest way of learning morse, but it has proven to succeed where others have failed.

73 Have fun ! GM4ZNX

-----  
Date: 13 Apr 91 04:30:45 GMT  
From: tut.cis.ohio-state.edu!n8emr!@ucbvax.berkeley.edu  
Subject: DX BULLETIN 18 ARLD018  
To: info-hams@ucsd.edu

=====  
| Automatic relayed from packet radio via |  
| N8EMR's Ham BBS, 614-895-2553 |  
=====

ZCZC AE24  
QST DE W1AW  
DX BULLETIN 18 ARLD018  
FROM ARRL HEADQUARTERS NEWINGTON CT  
APRIL 12, 1991  
RELAYED BY KB8NW/OBS & BARF-80 BBS  
TO ALL RADIO AMATEURS

Thanks to Paul Young, K1XM and the Southern New England DX Association for the following DX information.

FROM THE DXCC DESK. Documentation has been received and accepted for the S20VT operation by Vince Thompson, K5VT. This operation is creditable for DXCC.

Please do not submit cards for the Seal Island or Penguin Island operations. This location is not currently a DXCC country and all cards submitted will be returned without credit.

BANGLADESH, S2. Jim, VK9NS, has completed his operation from S2. It has been reported he plans to return for another operation in mid May, after his planned trip to Bhutan.

VATICAN, HV. HV3SJ is expected to active this weekend.

COMOROS, D6. Frank, DL7FT, is very active as D68FT. On CW check around 21030 KHz and SSB on 28495 KHz. He is expected to leave for Madagascar soon.

MONACO, 3A. 3A/DK6AS has been active on CW. Check on 15 meters. Also look on 7003 and on the WARC bands.

SAN FELIX, CE0. XQ0X continues to make this one common. Check 28495 to 28505, 28230 to 28260 and 7042 KHz from 2100 to 0400 UTC. QSL via CE3ESS.

BURKINO FASO, XT. XT2PS is active on 10 meters. Try 28490 to 28510 KHz around 1200 UTC.

JUAN FERNANDEZ, CE0. CE0ZVS has been active from 0000 to 0300 UTC on the lower 30 KHz or so of 15 meter CW. CE0ZCD has been on around 21230 KHz.

PITCAIRN, VR6. VR6KY has been on several times this week on 28480 around 2000 to 2030 UTC.

The Yuri Gagarin Cup. This year there will be a special running of the Yuri Gagarin Cup on April 14 from 0000 to 1600 UTC to commemorate the 30th anniversary of Gagarin's first flight. Exchange RST and ITU Zone. Operate 80 through 10 meters, no WARC bands. Score one point per QSO on your own continent and three points per QSO with different continents. Work stations once per band, cw only. Entry classes are Single Operator, single band, Single Operator, multi band and Multioperator Single Transmitter. Submit logs by May 31 to Contest Committee, Box 88, Moscow, USSR.

Good Luck on DX de KB8NW

-----  
Date: 12 Apr 91 19:31:31 GMT  
From: ucselx!sol.ctr.columbia.edu!emory!swrinde!cs.utexas.edu!convex!texsun!letni!  
rwsys!kf5iw!k5qwb!lrrk@ucsd.edu



Subject: FCC & Scanners, the REAL story  
To: info-hams@ucsd.edu

phillips@fozzie.nrl.navy.mil (Lee Phillips) writes:

```
> In article <4yD8Z2w163w@k5qwb.lonestar.org> lrk@k5qwb.lonestar.org (Lyn R. Ke
>
> Most criminals aren't smart enough to use a scanner. Either the
> smart ones have never been caught or there aren't any.
>
> It's pretty routine here in Washington for drug dealers to monitor the
> police frequencies. The police have sluggishly returned to using
> coded language to refer to locations instead of transmitting addresses
> in the clear. They're not equipped with voice encryption. (This is
> just for information. I'm not in favor of banning radio receivers
> nor drugs.)
> --
>
> Lee Phillips
> phillips@fozzie.nrl.navy.mil
> phillips@cmf.nrl.navy.mil
> phillips@lcp.nrl.navy.mil
```

Actually I should have said 'effectively use'. One case here a bank robber was not captured for several years and when he was caught he had a scanner. Unfortunately, for him, he saw the police first when they all followed him off the freeway. Monitoring the wrong freq maybe, but if he was good at it, he would have know to avoid certain banks. Since he didn't, I figure he didn't monitor effectively. But then when the cops approached, he shot himself in the head and missed. Now in prison.

```
-----
73,                lrk@k5qwb.lonestar.org                lrk@k5qwb.UUCP
Lyn Kennedy        utacfd.utarl.edu!letni!rwsys!kf5iw!k5qwb!lrk
                   K5QWB @ N5LDD.#NTX.TX.US.NA
                   P.O. Box 5133, Ovilla, TX, USA 75154
```

----- "We have met the enemy and they are us." Pogo -----

```
-----
Date: 5 Apr 91 22:13:36 GMT
From: hpcc05!hpcuhb!hpda!hpcuhc!pollux!mlau@hplabs.hpl.hp.com
Subject: HamStacks - Monthly Announcement
To: info-hams@ucsd.edu
```

Does anything like this for generating question on IBM PC's exsists ??

Mel, mlau@pollux.hp.com

-----  
Date: 8 Apr 91 09:10:58 GMT  
From: hpda!hpcuhb!hpsqf!hpqmola!hpqmolb!dstock@hplabs.hpl.hp.com  
Subject: HF rig names?  
To: info-hams@ucsd.edu

You haven't specified whether you want only current production names or all-time lists.

Seperate transmitters are not made by the Japanese, although there are a number of publised designs, and kits for mostly low power transmitters. these are usually used along with a seperate receiver.

Some transceivers (older) are amateur band only, so a general coverage receiver is complementary.

A seperate receiver can also be used as a piece of test gear - very helpful when the transceiver goes down.

It is   oops goodbye !!!!!

-----  
Date: 8 Apr 91 13:09:31 GMT  
From: hpda!hpcuhb!hpsqf!hpqmola!hpqmolb!dstock@hplabs.hpl.hp.com  
Subject: HF rig names?  
To: info-hams@ucsd.edu

That oops goodbye was my machine about to go down. sorry for the interruption....

A complete listing of all commercially sold equipment past and preasent could inundate you

An interesting set of questions, everyone will be wondering what the purpose is. care to enlighten us ?

For some reason this ~~editor~~ editor refuses to allow me to clear the above rubbish, I'm going to go straight to this computer's major data bank with a very large axe and give it a reprogramming it will never forget.  
73 GM4ZNX

-----  
Date: 13 Apr 91 03:35:31 GMT  
From: ogicse!usenet!jacobs.CS.ORST.EDU!youngqd@ucsd.edu  
Subject: Icom charge currents?  
To: info-hams@ucsd.edu

In article <1991Apr12.214209.7575@mthvax.cs.miami.edu> wb8foz@mthvax.cs.miami.edu (David Lesher) writes:

>I'm building my own version of the ICOM rapid/slow charger for my 02  
>batteries, such as BP-7's, -8's and others.

Ni-Cad Batteries are usually charged at 10% of the amp hour rating for 14 - 16 hours. I assume that means 1/3 of the charge energy is lost, 2/3 goes to the battery. Example 700 maH battery charges at 70 ma for 15 hours, at which time it is fully charged. If you want to charge it in 4 hours:  $70 \times (16/4) = 280$  ma or .280 Amps. If you dare charge it in 1 hour:  $70 \times 16 = 1120$  ma = 1.120 Amps. It is my understanding that battery life is significantly shortened as the charge rate is increased past the 16 hour charge rate.

-----  
Date: 12 Apr 91 16:50:20 GMT  
From: sdd.hp.com!mips!cs.uoregon.edu!milton!sumax!amc-gw!pilchuck!ssc!tad@ucsd.edu  
Subject: Info-Hams Digest V91 #267  
To: info-hams@ucsd.edu

In article <9104070433.AA13736@ucsd.edu>, CSMSCST@MVS.OAC.UCLA.EDU (Chris Thomas, AA6SQ) writes:

>  
>  
> My favorite propagation pgm is W6EL's Miniprop. The author,  
> Shel (aonther one), is known for his saying "Muf is not  
> enuf". This pgm has helped me shag a couple of rare ones by  
> telling me things other propagation pgms didn't.

I'll put in a vote for Miniprop. I have tried several commercial propagation software packages, and I like this one the best. Well worth the \$49!

Tad Cook  
Seattle, WA  
Packet: KT7H @ N7ENT.#WWA.WA.USA.NA  
Phone: 206/527-4089  
MCI Mail: 3288544  
Telex: 6503288544 MCI UW  
USENET:...uw-beaver!sumax!amc-gw!ssc!tad  
or, tad@ssc.UUCP

-----  
Date: 5 Apr 91 09:04:27 GMT  
From: hpda!hpcuhb!hpsqf!hpqmolb!dstock@hplabs.hp1.hp.com  
Subject: Large 110->220 Transformers.  
To: info-hams@ucsd.edu

When using an auto transformer, take care

If line and neutral are swapped for any reason, your appliance's power to ground insulation will be stressed at 240v not the 110v that it was designed for.

73 Gm4ZNX

-----  
Date: 3 Apr 91 18:06:40 GMT  
From: microsoft!joehol@uunet.uu.net  
Subject: mods for IC-740  
To: info-hams@ucsd.edu

Has anybody out there made the 'resister' mod for the  
IC-740 ???

If so, can you tell me what exactly the mod will do ?

Joe Holman, KA7LDN  
uw-beaver!microsoft!joehol  
joehol@microsoft.uucp

-----  
Date: 12 Apr 91 17:16:55 GMT  
From: sdd.hp.com!elroy.jpl.nasa.gov!lll-winken!unixhub!stanford.edu!  
paulf%shasta.Stanford.EDU@ucsd.edu  
Subject: Most Offensive Scanner  
To: info-hams@ucsd.edu

In article <1991Apr11.203057.9022@en.ecn.purdue.edu> ghg@en.ecn.purdue.edu (George Goble) writes:

>In article <1594@msa3b.UUCP> kevin@msa3b.UUCP (Kevin P. Kleinfelter) writes:

>>Many (misguided) public officials and citizens would like to make  
>>scanner coverage of certain frequencies illegal. (i.e. public service  
>>bands, cellular phones, etc.)

>>

>>I'm now in the market for a scanner covering as much of the "offensive"  
>>spectrum as possible; ideally I'd get a scanner which covered the  
>>frequencies that are most likely to be restricted. I don't mind making  
>>mods if I have to, but I can't handle anything really complex.

>>

>>Any suggested models?

>

>Icom R-9000. DC to Daylight, 30 Khz to 2 Ghz (no holes) in 10 Hz steps,  
>1000 mems + spectrum display, all modes. Often called an "Assault Radio".  
>>(When scanners are outlawed, only outlaws will be informed.)

Icom R-1. Nervous DC to Microwaves, 100 kHz to 1.3GHz (no holes) in 500 Hz  
steps. 100 Memories, multiple scan modes, AM/FM/NBFM. Often called a  
"Concealed Assault Radio".

;-)

-=Paul Flaherty, N9FZX | "Think of it as evolution in action."  
->paulf@shasta.Stanford.EDU | -- Larry Niven and Jerry Pournelle

-----  
Date: 12 Apr 91 18:05:09 GMT

From: casbah.acns.nwu.edu!zaphod.mps.ohio-state.edu!swrinde!cs.utexas.edu!convex!  
texsun!letni!rwsys!kf5iw!k5qwb!lrk@ucsd.edu

Subject: Most Offensive Scanner

To: info-hams@ucsd.edu

kevin@msa3b.UUCP (Kevin P. Kleinfelter) writes:

> Many (misguided) public officials and citizens would like to make  
> scanner coverage of certain frequencies illegal. (i.e. public service  
> bands, cellular phones, etc.)

>

> Now I'm not really interested in listening in on Joe Salesman phoning  
> in his orders, but I'd like to preserve my ability to receive these  
> bands -- especially if some joker might make it illegal.

>

> I'm now in the market for a scanner covering as much of the "offensive"  
> spectrum as possible; ideally I'd get a scanner which covered the

> frequencies that are most likely to be restricted. I don't mind making  
> mods if I have to, but I can't handle anything really complex.  
>  
> Any suggested models?

I would suggest the Radio Shack 2004 thru 2006. I know most of these  
( I think all ) can be easily modified to receive the locked out freqs  
with a simple mod. They are pretty good for the price. If you can  
afford it, go for the Icom R-7000 or R-9000 although they are not  
as good at 'scanning' in some modes.

-----  
73,                   1rk@k5qwb.lonestar.org                   1rk@k5qwb.UUCP  
Lyn Kennedy           utacfd.utarl.edu!letni!rwsys!kf5iw!k5qwb!1rk  
                      K5QWB @ N5LDD.#NTX.TX.US.NA  
                      P.O. Box 5133, Ovilla, TX, USA 75154

----- "We have met the enemy and they are us." Pogo -----  
-----

Date: 13 Apr 91 08:46:19 GMT  
From: tut.cis.ohio-state.edu!n8emr!@ucbvax.berkeley.edu  
Subject: SATELLITE BULLETIN 94  
To: info-hams@ucsd.edu

=====  
|     Automatic relayed from packet radio via                   |  
| N8EMR's Ham BBS, 614-895-2553                                 |  
=====

ZCZC AS63  
QST DE W1AW  
SATELLITE BULLETIN 94  
FROM ARRL HEADQUARTERS  
NEWINGTON CT APRIL 4, 1991  
TO ALL RADIO AMATEURS

A010 APOGEE TIMES AND LONGITUDES,  
APR 5 0131Z AT 015W 1310Z AT 191W  
APR 6 0049Z AT 006W 1229Z AT 181W

A013 APOGEE TIMES AND LONGITUDES,  
APR 5 0646Z AT 135W 1813Z AT 307W  
APR 6 0539Z AT 119W 1706Z AT 291W

A021 APOGEE TIMES AND LONGITUDES,

APR 5 0013Z AT 268W 0157Z AT 294W 0342Z AT 321W  
APR 6 0040Z AT 277W 0225Z AT 303W 0410Z AT 329W

OTHER AMATEUR SATELLITE REFERENCE ORBITS,  
APR 5 U011 0046Z AT 062W RS10/11 1909Z AT 008W  
RS12/13 2117Z AT 355W  
APR 6 U011 0120Z AT 070W RS10/11 1754Z AT 351W  
RS12/13 2146Z AT 004W.  
COPIED FROM W1AW BY RALPH, W7DIB @ AA6QN

-----  
Date: 13 Apr 91 08:46:00 GMT  
From: tut.cis.ohio-state.edu!n8emr!@ucbvax.berkeley.edu  
Subject: SPECIAL BULLETIN 9 ARLX009  
To: info-hams@ucsd.edu

=====  
| Automatic relayed from packet radio via |  
| N8EMR's Ham BBS, 614-895-2553 |  
=====

ZCZC AX31  
QST DE W1AW  
SPECIAL BULLETIN 9 ARLX009  
FROM ARRL HEADQUARTERS NEWINGTON CT  
APRIL 10, 1991  
RELAYED BY KB8NW/OBS & BARF-80 BBS  
TO ALL RADIO AMATEURS

Shuttle mission STS-37 with its all-ham crew, got its lifeline  
extended by one day because of unfavorable weather conditions. Crew  
members will operate voice and slow-scan television on a random basis.

-----  
End of Info-Hams Digest  
\*\*\*\*\*